

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit 2827

I hereby certify that this correspondence and all marked attachments are being deposited with the United States Postal Service as first-class mail in an envelope addressed to: United States Patent and Trademark Office, P.O. Box 2327, Arlington, VA 22202, on

July 9, 2002
(Date)
Drew S. Hamilton
Drew S. Hamilton, Reg. No. 29,801

AMENDMENT

United States Patent and Trademark Office
P.O. Box 2327
Arlington, VA 22202

RECEIVED
JUL 18 2002
TECHNOLOGY CENTER 280000

In response to the Office Action mailed April 10, 2002, Applicant respectfully submits the following amendments and comments in connection with the above-captioned application.

Attached are amended Figures 1-4, submitted for approval in response to the Examiner's objection to the Drawings in the above-identified Office Action. The amendment consists of adding a legend "Prior Art" to each of these figures.

Please cancel Claims 2 and 8 without prejudice.
Please amend Claims 1 and 7 as follows:

1. (Amended) An electrical device comprising:

Appl. No. : 09/735,030
Filed : 12/11/00

a plurality of printed circuit boards configured into a multi-layer configuration;
at least a first printed circuit board of said plurality of printed circuit boards comprising a primary winding of a transformer;

at least a second printed circuit board of said plurality of printed circuit boards comprising a secondary winding of the transformer; and

a plurality of connector pins, wherein each pin of the plurality of connector pins is configured to electrically connect to either the primary winding or the secondary winding, and wherein each pin of the plurality of connector pins penetrates only the at least one first printed circuit board or the at least one second printed circuit board.

7. (Amended) An electrical device comprising:

a plurality of core members;

a plurality of printed circuit boards configured to be stackable in a multi-layer configuration between the core members;

at least a first printed circuit board of the plurality of printed circuit boards comprising a primary winding of a transformer;

at least a second printed circuit board of the plurality of printed circuit boards comprising a secondary winding of the transformer;

a connection member configured to selectably connect the winding on at least two of the plurality of printed circuit boards in either a parallel or a series electrical configuration; and

a plurality of connector pins configured to electrically connect the windings on the plurality of printed circuit boards to a main circuit board, wherein each pin of the plurality of connector pins penetrates only the at least one first printed circuit board or the at least one second printed circuit board.

Appl. No. : 09/735,030
Filed : 12/11/00

REMARKS

In response to the Office Action mailed April 10, 2002, Applicant respectfully requests the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments. By this paper, Claims 2 and 8 have been cancelled without prejudice and Claims 1 and 7 have been amended. Therefore, Claims 1, 3-7, 9-11, 17 and 18 are presented for reconsideration and further examination.

The changes to the specification and amended claims are shown on a separate set of pages attached hereto and entitled **VERSION WITH MARKINGS TO SHOW CHANGES MADE** which follows the signature page of this Amendment. On this set of pages, the insertions are underlined while the **[deletions are bracketed and in bold type]**.

Objection to Drawings

Figures 1-4 have been objected to because these figures lack a legend identifying the figures as prior art. Submitted herewith are amended Figures 1-4 for the Examiner's approval. By this amendment, a legend "Prior Art" has been added to each of these figures as suggested by the Examiner. Accordingly, Applicant respectfully submits that the basis for this objection has been removed, and requests the Examiner to withdraw this objection.

Rejection under 35 U.S.C. § 112

Claim 4 was rejected under 35 U.S.C. § 112 first paragraph as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor had possession of the claimed invention. Applicant respectfully traverses this rejection. Claim 4 recites "a connector configured to connect the winding on at least two of the plurality of printed circuit boards in either a parallel or a series electrical configuration." Figures 9A and 9B illustrate a connector in the form of a jumper 920 that joins the windings of secondary PCB 530 with the windings of secondary PCB 535 in a series and a parallel electrical configuration, respectively. The Specification, at least at page 11, lines 6-15, describes this jumper connection. Additionally, the Specification, at page 11, lines 16-19, states that the connector can also be a hardwired jumper on the main board 110.

Appl. No. : 09/735,030
Filed : 12/11/00

Accordingly, Applicant submits that the Specification fully enables one skilled in the relevant art to make and use the invention.

Claim 6 was rejected under 35 U.S.C. § 112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention because it was unclear if the main circuit board in Claim 6 was the same main circuit board of Claim 1. Claim 1 has been amended to delete the reference to a main circuit board. Thus, Applicant submits that the basis for this rejection has been removed and respectfully requests that the rejection be withdrawn.

Rejections Under 35 U.S.C. § 102

In paragraph 6, Claims 1-11 and 17-18 have been rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 5,521,573 issued to Inoh et al. (hereinafter "Inoh"). Claim 1 is generally directed to an electrical device having a plurality of printed circuit boards configured into a multi-layer configuration. The printed circuit boards have a primary winding of a transformer and a secondary winding of the transformer. Claim 1, as amended, contains the feature of "a plurality of connector pins, wherein each pin of the plurality of connector pins is configured to electrically connect to either the primary winding or the secondary winding, and wherein each pin of the plurality of connector pins penetrates only the at least one first printed circuit board or the at least one second printed circuit board."

The Examiner has stated that Inoh generally discloses an electrical device having a plurality of plate coils 58 configured into a multi-layer configuration. Figure 5 illustrates that primary terminals or connector pins 41 and secondary terminals or connector pins 42 are used to connect a conductor pattern 55 formed on each of these plate coils. However, each plate coil taught by Inoh has several primary connecting holes 51 through which the primary terminals extend, and several secondary connecting holes 52 through which the secondary terminals extend. See Inoh, col. 5, lines 41-54; Figures 4a, 4b, 5 and 7. Thus, both the primary terminals and the secondary terminals penetrate each plate coil.

On the other hand, the electrical device of Claim 1 is configured such that "each connector pin of the plurality of connector pins penetrates only the at least one first printed circuit board or the at least one second printed circuit board." Nowhere does Inoh teach using

Appl. No. : 09/735,030
Filed : 12/11/00

connector pins that only penetrate either the at least one first printed circuit board comprising the primary winding or the at least one second printed circuit board comprising the secondary winding. Furthermore, as the plurality of plate coils of Inoh are laminated together into a printed coil laminate 50, Inoh does not suggest using terminals that only penetrate either the first or second circuit boards as defined in Claim 1. Accordingly, Applicant submits that Claim 1 is neither anticipated nor made obvious by Inoh, and that Claim 1 defines subject matter that is patentable over the cited art.

Independent Claims 7 and 17 contain features similar to those set forth above with respect to Claim 1, and the arguments presented with reference to Claim 1 apply equally to the subject matter of Claims 7 and 17. Thus, Applicant submits that Claims 7 and 17 also define subject matter that is patentable over the cited art. Since Claims 3-6, 9-11 and 18 each depend from one of the above described independent claims, Applicant respectfully submits that these claims are also patentable over the cited art. Therefore, Applicant respectfully submits that Claims 1, 3-7, 8-11 and 17-18 are now in condition for immediate allowance and such prompt allowance of the same is respectfully requested.

CONCLUSION

The Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims for patentability purposes pursuant to statutory sections 102, 103 and/or 112, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above.

Any claim amendments which are not specifically discussed in the above remarks are not made for patentability purposes, and it is believed that the claims would satisfy the statutory requirements for patentability without the entry of such amendments. Rather, these amendments have only been made to increase claim readability, to improve grammar, and to reduce the time and effort required of those in the art to clearly understand the scope of the claim language. Finally, Applicant submits that the claim limitations discussed above represent only illustrative distinctions. Hence, there may be other patentable features that distinguish the claimed invention from the prior art.

Appl. No. : 09/735,030
Filed : 12/11/00

If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated:

July 9, 2002

By:

Drew S. Hamilton

Drew S. Hamilton
Registration No. 29,801
620 Newport Center Drive
Sixteenth Floor
Newport Beach, CA 92660
(619) 235-8550